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| 09/778,874 | 02/08/2001 | Mikio Ihama | 0042-0437P-SP | 6673 |

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EXAMINER

WALKE, AMANDA C

ART UNIT PAPER NUMBER

1752

DATE MAILED: 07/03/2003

KB

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,874

Applicant(s)

IHAMA, MIKIO

Examiner

Amanda C Walke

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 21 is/are rejected.
- 7) ☒ Claim(s) 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 17. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brust et al (6,100,019) in view of Nisikawa et al (6,007,977).

Brust et al disclose a silver halide photographic material comprising high bromide {111} tabular grains having a high chloride epitaxy. The grains are preferably silver iodochlorobromide and contain silver iodide in an amount of less than 10 mole %, and silver chloride in an amount of less than 10 % as well (column 3, line 53 to column 4, line 35). It would have been obvious to one of ordinary skill in the art to prepare the emulsion using any amount within these ranges. Additionally, the inventive grains comprise either 0.75 mol % or 1.2 mol % iodide. The epitaxial deposits may constitute only 0.1 % of the total silver, thus the chloride may be added in an amount as low as 0.1 mol %. The grains account for at least 90 %, most preferably greater than 97 % of the total grain projected area, have a thickness of less than 0.2 microns, preferably less than 0.07 microns, an ECD of less than 6 microns, and an aspect ratio of at least 5 (column 5, lines 30-57). The grains may be hexagonal (column 7, lines 34-50). The grains contain high chloride epitaxies in the corners of the grains. The examples prepare grains having 6 epitaxial deposits, one in each corner of the grain, which implies that the grains formed by the examples are hexagonal grains. The pBr during emulsion preparation is preferably adjusted to be between

Art Unit: 1752

3.0 and 3.8, after the temperature has been set between 20 and 60 degrees C, and from looking at the inventive examples the temperature is preferably 40 degrees C (column 6, lines 45-67). The exemplified grains also contain one or more dislocation lines at the epitaxial junctions, demonstrating that the grains may have dislocation lines at the apexes of the grains. The material comprising the emulsion is coated on a support (column 10, lines 15-18).

Although the material does not specifically refer to the COV of the ECD of the grains, since the reference teaches that the emulsion should be monodisperse, that the COV would inherently be very low and would be less than less than the 30% and 20 % claimed given that it is most preferable for greater than 97 % of the emulsion to be comprised of the preferred grains which would have an ECD within the claimed range. The reference fails to disclose specific information on the edge lengths of the hexagonal grains.

Nishikawa et al disclose a silver chloriodobromide {111} emulsion comprising hexagonal grains containing dislocation lines in the apexes of the grains (column 4, lines 1-46). The reference teaches that it is preferable for hexagonal grains to have a ratio of the longest side to the shortest side of 2 or less (column 3, lines 11-26), and further teaches that a monodisperse emulsion will have a low COV of the ECD (15 5 or less) of the grains.

It would have been obvious to one of ordinary skill in the art to prepare the monodisperse high bromide {111} hexagonal grain emulsion of Brust et al using hexagonal grains having a ratio of the longest side to the shortest side of 2 or less given that it is taught to be preferable by Maruyama et al with reasonable expectation of achieving an emulsion having high sensitivity and graininess.

Allowable Subject Matter

3. Claims 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to teach or suggest to one of ordinary skill in the art to prepare the material of the present claim 1 or 2 wherein the pBr of the emulsion is at 40 °C is not more than 3.5.

Response to Arguments

4. Applicant's arguments and declaration filed 6/12/2003 have been fully considered but they are not persuasive.

Applicant has amended the present claims to require that the at least 85 % of the total grain meet the presently claimed conditions. Applicant has argued that the examples of the present specification demonstrate that unexpected results are obtained with respect to sensitivity, fog, and storage stability. Specifically, that when at least 85 % of the total grain projected area consists of the presently claimed grains an increase in the sensitivity and decrease the presence of fog is sustained over time meaning that an increase in storage stability is also achieved. The declaration compares emulsions d and e of the present specification with sample C of the Brust reference, which is the closest prior art of record. While on the surface it appears that higher percentages of the presently claimed grains in a grain population does result in a much higher sensitivity and storage stability and a decrease in fog, when one compares the preparation methods of the grains this difference in results can be explained. The inventive samples of the present invention contain much larger mole percentages of silver iodide (sample C comprises

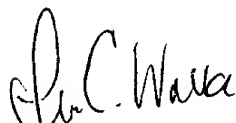
Art Unit: 1752

4.8⁰¹
0.75 % I whereas the samples of the invention comprise 15 mole %). It is well known in the art that the addition of iodide ions to the grain population, the result is increased photographic sensitivity, and this is taught in Research Disclosure 39121 on page 717. Additionally, the Brust reference teaches in column 3 that an aim of the invention of the reference is to increase the imaging sensitivity of an emulsion by the addition of epitaxies, thus it appears that what the applicant is claiming as unexpected results, is actually what the prior art of record teaches one of ordinary skill in the art to expect. Therefore, the arguments and the declaration evidence filed 6/12/2003 are not persuasive and the examiner maintains her position.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda C Walke whose telephone number is 703-305-0407. The examiner can normally be reached on M-R 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


ACW
June 27, 2003

Amanda C Walke
Examiner
Art Unit 1752


JANET BAXTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700